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ABSTRACT

An empirical study of the way children talk about art experiences is described and the meaning of this talk in terms of the cognition it represents is investigated. The criteria serving as the basis for creation of content analysis categories are subject matter, sensory elements, formal properties, technical competence, expressive elements, general perceptual interest, extra aesthetic function, and communication. Responses from a sample of students from grades kindergarten through twelve rollowing attendance at an opera performance and following viewing a slide reproduction of an oil painting were obtained by means of questionnaires or structured interviews. Results of the analysis of data serve as guidelines for educators, increasing knowledge about capabilities of groups of children within broad age classification to respond to the arts. (SHM)

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# "A DEVELOPMENTAL STUDY OF THE CRITERIA USED BY CHILDREN TO JUSTIFY THEIR AFFECTIVE RESPONSE TO ARTS EXPERIENCES"

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# INTRODUCTION

## Overview of the Problem

Aesthetic educators have long been concerned with the problem of enhancing children's appreciation of objects and experiences produced by artists. Artists create objects, events, and experiences for the sustained perceptual interest of others, and aesthetic educators have attempted to create strategies for helping children to find enjoyment and value in these works of art by providing a variety of repeated and enlarged encounters with these works. In creating these strategies, however, educators have often been hampered by their lack of knowledge about children's ability to respond to art. Sensing the need for further knowledge in this area, investigators have, in recent years, directed study in this direction and have begun to examine how children respond to the arts. Earlier systematic work had been done by some. Harris (1963), Salome (1965) for example saw the works of art produced by children (drawings, paintings, sculpture, etc.) as central to their investigation. Others, Child (1962), Beittel (1956), had dealt exclusively with children's preferences for works of arts or how they tended to agree or disagree with the preferences of experts.

Recently investigators began to conduct empirical studies of the way children talk about art works, and the meaning of this talk in

terms of the cognition it represents.

Smith (1967) for example, demonstrated in a small exploratory study that children can be taught to make more critical judgments of paintings. Janes (1970), demonstrated that older children (11 year olds) are more fluent than seven year olds in the number and variety of their responses to art objects. Machotka (1966), showed that children responding to art works vary in their use of critical criteria such as color, content, style, and composition according to their chronological age. Wilson (1966) noted few differences among fifth, seventh, ninth, and eleventh grade students in the perceptual mode of their response to paintings. However, those who were more highly trained in art tended to look at more aspects of paintings, and more frequently used synthesis and analysis categories in their response.

Recent studies by Rump and Southgate (1967), Moore (1970), and Wilson (1971) are concerned about the developmental aspects of children's talk about art. Using content analysis procedures, these investigators have studied children's language and have arrived at a variety of conclusions about the abilities of children in this domain.

As is common in this area, however, the above investigators used paintings as the only stimuli for provoking children's verbal responses.

The content analysis categories used by these investigators in the analysis of the responses of children in their studies are related specifically to painting. As such they are not readily generalizable to other art experiences a child may have and may wish to talk about.

This investigation utilized theories of Piaget and Broudy to focus upon children's justification of their affective response to a painting and to a second art experience with live opera.

The judgmental process often begins with a simple impressionary response of an "I like it" variety. Although children's affective or impressionary response to arts is considered important and desirable, this type of response does not explain or clarify itself nor aid in the determination of what children are responding to within the experience. For this reason, the study attempted not only to elicit children's affective response but also to ask children to articulate reasons for their response. What needed to be pursued, in the judgment of the investigator, was the cognitive aspects of this affective response. In addition, it was possible that the number and type of responses to one type of arts experience might change when a child was confronted with a different type of arts experience. For this reason each child in this investigation responded to two experiences, and the criteria he used in his verbal response to each was analyzed.

As a theoretical basis for the creation of content analysis categories used in this study the writings of several aestheticians were surveyed. Sibley (1966), Beardsley (1958), Aldrich (1963), Pepper (1965), and Broudy (1966, 1968) had all created taxonomies or sets of criteria that they considered relevant for discussion, criticism, or analysis of works of art. The category system suggested by Broudy proved to be most suitable for analyzing children's talk about art. Professor Broudy maintains that one can make intelligible and defensible

judgments about a work of art with respect to its:

subject matter
sensory elements
formal properties
technical competence
expressive elements
general perceptual interest
extra aesthetic function
communication

These criteria served as the basis for the creation of content analysis categories.

In order to provide a developmental framework for analyzing the children's responses to the art forms in this study, a psychologist was needed. The psychologist chosen was Jean Piaget. (1967)

Piaget has focused significantly on the various periods of cognitive development that children pass through as they move towards maturity. Evidence for the existence of those periods contributes to the notion that children's ability to use critical criteria described by Broudy probably varies according to some developmental structure which may pattern itself on the periods identified by Piaget or have a distinct pattern of its own.

In order to pursue the developmental aspects of children's verbal response to arts experiences, an experimental study was conducted to answer the following questions:

When justifying their affective response to arts experiences:

(A) Do older children tend to use a greater variety of critical categories than younger children?

(B) Do older and younger children tend to use different critical categories?

(C) Does the type of experience a child is responding affect the variety and type of categories he uses?

## METHOD OF THE STUDY

In September of 1971, approximately nine hundred students from District #10, Mineola, N. Y., grades kindergarten through twelve, attended performances of the opera, "Gianni Schicchi" in the Mineola Senior High School auditorium.

The opera was sung in English and performed by members of the Metropolitan Opera studio in collaboration with the Orchestra da Camera, a chamber orchestra in residence in the Mineola School District.

"Gianni Schicchi" composed by Giacoma Puccini is a one act, Italian comic opera. The opera's plot tells the story of conniving relatives of Buosa Donato, who attempt to become the heirs in the will of the dying old gentleman. Gianni Schicchi, a brilliant and shrewd manipulator of the law, turns the tables of the relatives by substituting himself in the will. The opera humorously portrays Gianni Schicchi impersonating the old man and tricking the doctor into believing his patient has been cured. After a scene in which a

notary reads the will to the shocked relatives, the opera concludes with a rich Schicchi, driving the greedy relatives from his house.

The actors and orchestra are colorfully dressed in the costumes of the play's era and the portable sets of the opera provide a rich and colorful background.

The nine hundred children attended the performance in class groups, accompanied by their respective teachers. All grade levels, kindergarten through twelfth grade were represented.

For purposes of studying their verbal responses to the opera, a sample of six hundred thirty-one children was selected. The responses of approximately two hundred fifty of the original nine hundred were eventually eliminated from the study because of incomplete data on the questionnaires: missing names, blank responses, response to one experience present but response to the second experience missing, etc. An attempt was made to gather verbal responses of children from all grade levels of the school district. Although it was impossible to randomly assign individual students to the performances, whenever possible a random selection of intact classes at each level (1st, 2nd, 3rd, etc. was made). For purposes of analysis, the sample was broken down in the following way:

| AGE CLASSIFICATION[1] | NUMBER OF STUDENTS |
|---|---|
| 6-7½ | 77 |
| 7½-11½ | 297 |
| 11½-15½ | 192 |
| 15½-18 yrs. | 65 students |

[1] These classifications roughly approximate the age classifications used by Piaget to describe the periods of cognitive development of children.

## Instrumentation

Verbal Response to the Opera. When students returned to classrooms following their attendance at the opera, they were asked to respond to a pencil-paper questionnaire. This questionnaire[1] asked students to give their affective response to the event in the following way:

> "Please place a check above the line of the statement that best describes your feelings about the quality of this performance". (Check one)
>
> _____ _____ _____ _____
> It was great! I liked it. I can't decide. I didn't like it very much.
>
> _____
> It was terrible!

In earlier studies of the response habits of children, it was found that the first response offered by students when asked to evaluate an event is the affective type. Typically, "I like it" or "It was terrible"! make up standard responses to events. These are of the psychological report type defined by Ecker (1967). This item appears on the questionnaire and enables students to make a response.

Another item encouraged them to go beyond the initial response to support their psychological report. Part "b", Question 2, asked:

> "Why do you feel this way? Try to tell what it was in the performance that made you feel this way. Use this space on the right of this page to write your answer".

This section allowed the student to elaborate upon his affective "I like (dislike) it" response and to offer his cognitive reasons for

feeling this way. The verbal written (or oral) response of children to this question provided the data for content analysis.

The same form of the questionnaire was used by children at all age/grade levels. Special instructions were given to primary teachers and teachers of children who have difficulty reading. In the latter case, instructions requested teachers to read the questionnaire aloud to their classes and answer any questions about grammar or use of vocabulary. Teachers were asked to encourage children to write complete responses but were asked not to coach children by supplying teacher response or "correct" responses. Teachers were encouraged to allow children to respond freely to the questions.

In lower primary grades, particularly with six and seven year olds who were just learning to read and would have difficulty reading a paper and pencil questionnaire, a structured interview schedule was used. The investigator taped children's responses to questions that asked children for their affective response (like it, don't like it) and their reasons for feeling that way. The taped responses were later transcribed into written form for rating purposes.

Verbal Response to the Painting. In gathering students' responses to a second art experience, similar procedures were used.

Within the month following the "Gianni Schicchi" performance, the same six hundred thirty-one children who responded to the opera were asked to verbally respond to a slide reproduction of an oil painting.

A slide reproduction of Marc Chagall's "I and my Village" was projected on a white wall or screen in the child's classroom. Each

student was asked to study the reproduction and write his response on a pencil and paper questionnaire supplied by the investigator. The students in the sample viewed the slide reproduction singly, in small groups, or in regular class groups. There was no limit placed on the amount of time the reproduction could be viewed.

As was done in the opera experience, students were asked first to give their affective response. "Please place a check above the line of the statement that best describes your feelings about this painting". Then they were asked to give a cognitive response, "Why do you feel this way"?, "Try to tell what it is in the painting that makes you feel this way"?

The same form of questionnaire was used by children at all age/grade levels.

Special instructions were given to primary teachers and teachers of children who have difficulty reading. In the latter case, instructions requested teachers to read the questionnaire aloud to their classes and answer any questions about grammar or use of vocabulary. Teachers were asked to encourage children to write complete responses but not to coach children by supplying teacher response or "correct" responses. Teachers were encouraged to allow children to respond freely to the questions.

In lower primary grades, particularly with six and seven year olds a structured interview schedule was used. The investigator taped children's responses to questions that asked children for their affective response and their reasons for feeling that way. The taped

responses were later transcribed into written form for rating purposes.

## Content Analysis Procedures

The verbal statements made by students in their written or spoken response to each of the art experiences constituted the data for the content analysis.

Wilson (1966) found that the number of words used by children in their verbal response increased in frequency and complexity as children became older. It was assumed that students' verbal responses would range from one sentence or phrase with a few words to a full paragraph of sentences. The same was true of this study. The investigator using the category system based on Broudy's criteria, coded each sentence or phrase within a child's statement.

An example of the analysis and coding of a child's verbal statement is as follows:

The colors are good (sensory element) and it is nice to look at but I can't really (general perceptual interest) get a meaning. I get the feeling that it is about an old mixed (subject matter) up town but I still don't understand it. (general perceptual interest)

Criteria Used: SE, GP, SM - Total # of Criteria Used: 3

Since the variety of criteria used was an important variable in the study the coding system only took into account the different criteria used. Repetitive use of a certain criterion was not for purposes

of this study considered. If, for example, a child used "general perceptual interest" twice, it was coded once.

The following are selected examples of category use from children's verbal responses. These examples aided the investigator and judges to code students' verbal responses:

| | |
|---|---|
| Communication: | "It symbolizes man as a leader, the sheep as followers".<br>"He's trying to tell us to be kind to animals".<br>"It makes a person see that being greedy can only lead to disaster". |
| Expressive Elements: | "The melody is haunting."<br>"The painting has many passive and pleasant features".<br>"Parts make me depressed and others are more joyful".<br>"I felt sorry for the man". |
| Extra-Aesthetic Function: | "This painting should help people to be proud of their religion".<br>"It makes you think and you have to use your imagination".<br>"It could never brighten up a room". |
| Formal Properties: | "There's too much blue and not enough red".<br>"The figures and people blend into one another".<br>"You can see the same figure being repeated in different parts of the painting".<br>"It's very disorganized with things put in it merely to fill up spaces". |
| General Perceptual Interest: | "It's boring".<br>"It's confusing".<br>"I don't understand it".<br>"It doesn't make sense".<br>"It's interesting".<br>"The more I look at it the more I see". |

| | |
|---|---|
| Sensory Elements: | "He used my favorite colors".<br>" I liked the singing very much".<br>"The colors are dull".<br>"The music was good". |
| Subject Matter: | "it seems like a scene of a village".<br>"It's a painting of a bed".<br>"It looks like a Picasso".<br>"It's a story about two men fighting". |
| Technical Competence: | "He knows how to paint".<br>"The actors and actresses played their parts well".<br>"It's imaginative". (Note: The artist who created the work is imaginative). |
| Idiosyncratic: | "I'm no judge of this sort of thing".<br>"I need time to think about it".<br>"I just like it". (repetitive)<br>"I couldn't hear it".<br>"Because I got out of class". |

## Intra-Rater Consistency Procedures

In order to determine if the content analysis categories created for the study could be consistently applied to children's verbal responses to arts experiences with different analysts or judges arriving at approximately the same conclusions, the following procedures were used.

Two arts educators, one trained in music, the other in visual arts, were selected as judges. The two judges underwent a short period of training to acquaint them with the content analysis category system.[1] This was followed by a period of practice with responses

that had been previously discarded from the study (because of student absentees, missing data, etc.) The investigator and the two arts educators then independently analyzed a random sample of approximately one hundred thirty-one verbal responses drawn from the total sample of approximately thirteen hundred responses to the two arts experiences. From each verbal statement produced by a child, two types of data were produced: (1) a total of the variety of criteria found in the statement, and (2) a specific listing of the type of criteria found in the statement by a particular judge.

To obtain an estimate of the reliability of the ratings or scores given in (1), the Reliability by the Intra Correlation method described by Ebel[1] was used. The method requires the raters to rate an entry on one occasion. An $r$ statistic is generated which essentially is the average intercorrelation among the ratings of a child's statement by the three raters. The latter was used to determine if there was general agreement among the investigator and judges about the total number of criteria appearing in a statement. The tables on pages fifty-two and fifty-three summarize the findings.

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[1] Ebel, Robert in J. P. Guilford, Psychometric Methods, McGraw-Hill Book Co., New York: 1954, pp. 395-397.

Table 1

Reliability of Judge's Ratings of

Children's Statements: Opera

| Source | Sum of Squares | df | Variance |
|---|---|---|---|
| From Statements | 108.8 | 64 | 1.7 |
| From Judges | .80 | 2 | * |
| From Remainder | 13.60 | 128 | .106 |
| Total | 123.20 | 194 | * |

* Variance not needed and not computed.

$$r = \frac{1.7 - .106}{1.7} = .93 \text{ (opera)}$$

Table 2

Reliability of Judge's Ratings of

Children's Statements: Painting

| Source | Sum of Squares | df | Variance |
|---|---|---|---|
| From Statements | 152.54 | 62 | 2.46 |
| From Judges | 1.31 | 2 | * |
| From Remainder | 2.69 | 12 | .0222 |
| Total | 156.54 | 188 | * |

* Variance not needed and not computed.

$$r = \frac{2.46 - .0222}{2.46} = .99 \text{ (painting)}$$

In both cases of opera and painting there is a high degree of agreement among the three judges regarding the variety of criteria found within children's verbal responses to the two experiences.

To determine if the investigator and judges found the same categories within each of the statements rated, percentages of total and partial agreement were computed.

Total agreement occurred when three raters found the same critical criteria within a particular statement. Partial agreement occurred when two of the three raters concurred on the criteria that were contained within a particular statement.[1]

The following table presents the findings of judge's attempts to describe what criteria are present within each statement:

Table 3

Percentages of Total and Partial Agreement Among Judge's Analysis of Verbal Responses: Criteria Within Painting and Opera Responses

| Art Experience | % of Times* There is Total Agreement | % of Times There is Partial Agreement |
|---|---|---|
| Opera | .72 | .95 |
| Painting | .70 | .84 |

* Rounded off to nearest whole number.

[1] Lasswell, Harold D., & Leites, Nathan, "The Reliability of Content Analysis Categories" in Language of Politics, The M.I.T. Press, Cambridge, Mass., pp. 83-126.

developed categories beyond those that were offered. Informally, judges commented on the possibility of breaking categories into subcategories because they saw different cognitive levels at work.

Future use of the category system presented in this study would probably gain from additional validity studies.

## Treatment of the Data

To accumulate evidence in support of Hypothesis 1, there is a difference between the proportion of younger children and the proportion of older children that use a particular critical category in justifying their affective response to an arts experience,

Children in age groups of 18-15½ and 15½-11½ were combined and classified as "older". Children in age groups of 11½-7½ and 7½-6 were combined and classified as "younger".

For each of the eight critical criteria a separate $X^2$ analysis was performed to determine if proportions of older or younger children used a criterion to a significantly greater degree than would be expected under chance occurrence.

A total of sixteen analyses, eight for each art experience, was performed. Two additional $X^2$ analyses were performed to determine if children in older or younger age groups used the non-critical criterion of "idiosyncratic" more often than the other group.

To accumulate evidence in support of Hypothesis 2, older children use a greater variety of critical categories than younger children in the justification of their affective response to arts expe-

Agreement among three judges is somewhat less when they are asked to identify what specific criteria are present although there is generally high agreement among at least two of the three judges.

It appears from these and earlier data that judges generally agree on the total number of criteria being used in a statement, but they find it somewhat more difficult to agree on the specific criteria that are present.

In spite of the fact that judges received training, interpretation of verbal responses is still a subjective affair. Agreement among ratings would probably increase with greater practice among judges and greater specification of rules for analyzing response. By pooling all possible responses to a particular art form and building a taxonomy of children's response (rather than providing a few select examples as was done in this study) the probability of agreement among judges would probably increase. The category system developed from Broudy's criteria apparentiy was a workable system for categorizing children's statements about opera and a painting. However, the judges accepted the system as a given. No real attempt was made by the investigator to test the validity of the category system. Would aestheticians or art educators agree that there is a congruence between the categories and the rules and samples offered as examples of criteria use? The lack of complete agreement among judges may have reflected their disagreement with the samples as examples of criteria use. It is possible that judges could not differentiate between certain categories or, if allowed to, would have

riences, and Hypothesis 3, the variety of critical categories used by children of different age groups in the justification of their affective responses to two different arts experiences will be similar. Any differences existing between the two sets of responses will be within the limits of chance error,

The two way analysis of variance with repeated measures on one factor (unequal n's)[1] was used to test the differences between the mean number of critical criteria used by each age group over the two arts experiences. In the repeated measures design the same subject is observed under more than one treatment condition. In this case, students in four age groups were observed under two experimental conditions: opera and painting. The variance associated with the mean number of critical criteria used by each age group under each condition was analyzed.

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[1] B. J. Winer, Statistical Principles in Experimental Design, McGraw-Hill Book Co., 1962, pp. 298-318.

## FINDINGS AND INTERPRETATION OF RESULTS

### Hypothesis 1

There is a difference between the proportion of younger children and the proportion of older children that use a particular critical category in justifying their affective response to an arts experience.

Tables 4 and 5 present each of the critical categories, and the observed proportion of older and younger children using those criteria in their verbal response to each arts experience and the resultant chi square values when individual chi square analyses were performed in order to test this hypothesis.

The data reported in the tables support the hypothesis that there are differences between the proportion of older and younger children using a particular criterion. A greater proportion of older children used categories of formal properties, communication, extra-aesthetic function, and general perceptual interest than younger children. This was true when children talked about both opera and about paintings. No children in the younger age classification (11½-6) were found to be using these critical criteria when they verbally responded to the opera.

Table 4

Chi Square Analysis of

Observed Proportions of Children

Using Specific Critical Categories: Opera

| Critical Category | Older Children 18-11½ years N = 257 | Younger Children 11½-6 years | Chi Square Values |
|---|---|---|---|
| FP | .02 | 0 | |
| C | .01 | 0 | |
| EA | .01 | 0 | 19.44 ** (a) |
| GP | .57 | .22 | 48.31 ** |
| SH | .15 | .29 | 13.30 ** |
| SE | .28 | .40 | 5.83 * |
| E | .06 | .07 | .06 |
| TC | .12 | .17 | 1.95 |
| ID | .13 | .16 | .44 |

a) Three categories were combined because expected values in each of the cells were less than five.

* $P < .05$

** $P < .01$

Table 5

Chi Square Analysis of

Observed Proportions of Children

Using Specific Critical Categories: Painting

| Critical Category | Older Children 18-11½ years N = 257 | Younger Children 11½-6 years N = 374 | Chi Square Values |
|---|---|---|---|
| FP | .10 | .01 | 21.40 ** |
| C | .25 | .05 | 30.15 ** |
| EA | .05 | .01 | 7.26 ** |
| GP | .42 | .17 | 33.72 ** |
| SM | .47 | .36 | 3.85 * |
| SE | .29 | .48 | 13.07 ** |
| E | .13 | .12 | .05 |
| TC | .13 | .09 | 1.21 |
| ID | .06 | .13 | 6.32 * |

* P < .05

** P < .01

Although a sizeable proportion of children in both age classifications used the category of sensory elements, a significantly greater proportion of younger children used this category in their verbal response to opera and painting. In responding to the opera, a significantly greater proportion of younger children used the subject matter category. In responding to the painting however, a greater proportion of older children used this category.

There were no differences between the proportions of younger and older children using categories of expressive elements and technical competence when they responded to opera and painting.

Although hypothesis 1 is directed to the investigation of what critical categories children were using, two additional chi square analyses were performed to determine if proportions of older and younger children differed in their non-use of critical criteria. That is, was there any difference in the proportions of older and younger children using the idiosyncratic category?

In talking about a painting a greater proportion of younger children use the idiosyncratic category. However, in talking about opera, there was no difference between the proportions of younger and older children who used the idiosyncratic category as their sole response to this type of art experience.

## Hypothesis 2

Older children use a greater variety of critical categories than younger children in the justification of their affective response

to arts experiences.

In order to test this hypothesis, an analysis of variance repeated measures design was used. In this analysis, Factor A (four age groups) and B (two art experiences) and the interaction of A and B were all found to be significant at the $P < .01$ level.

Table 6

Repeated Measures Analysis of Variance;

Use of a Variety of Critical Criteria by

Different Age Groups

| | df | MS | F | |
|---|---|---|---|---|
| Between Subjects | | | | |
| (A) Age Groups | 3 | 13.257 | 14.366 | ** |
| Subjects Within Groups | 627 | .923 | | |
| Within Subjects | | | | |
| (B) Art Experience | 1 | 30.251 | 50.147 | ** |
| (AB) | 3 | 7.108 | 11.783 | ** |
| By Subjects Within Groups | 627 | .603 | | |

** $p < .01$

The data supports the hypothesis that there are differences from one age group to another in the variety of critical categories they use to justify their affective response to the arts experiences. The significant interaction further suggests that those differences in the variety of categories being used are related to the age of the student and the type of art experience he is responding to.

In order to examine further the nature of the differences existing between the observed means of critical categories being used by children of each group, an analysis of variance for simple effects was performed. This is equivalent to a single factor analysis of variance of the mean responses to the opera and a single factor analysis of variance of the mean responses to the painting.

The results of this analysis are summarized in the following table:

Table 7

Analysis of Variance for Simple Effects:

Painting and Opera

| Source of Variance | SS | df | MS | F |
|---|---|---|---|---|
| A for $b_1$ (age x opera) | 2.177 | 3 | .725 | .78 N.S. |
| A for $b_2$ (age x painting) | 109.96 | 3 | 36.65 | 39.7 ** |
| Within cell | 578.58 | 627 | .923 | |

** $P < .01$

Table 7 reveals that the observed means of critical criteria used by children in response to an opera are not significantly different from one another. In this sample, older and younger children use approximately the same number of criteria in their response to opera. In response to a painting however, the data suggests that the mean number of criteria used by children differ among older and younger children. In order to pursue those differences, multiple comparisons were made among the mean number of critical criteria used by each age group in response to the painting and "F" values were computed.

The following table shows those comparisons:

Table 8

Comparisons Between Age Groups:

Variety of Criteria Used in Response to Painting

| | Age Group | | | |
|---|---|---|---|---|
| | 6-7½ | 7½-11½ | 11½-15½ | 15½-18 |
| Means | 2.07 | 2.40 | 2.80 | 3.03 |
| 2.07 | -- | .33* | .73** | .96** |
| 2.40 | -- | -- | .40** | .63** |
| 2.80 | -- | -- | -- | .23 ns |
| 3.03 | -- | -- | -- | -- |

* P < .05
** P < .01

All means are different from one another with the exception of the mean number of criteria used by children in age groups 18-15½ and 15½ and 11½. Means of these two groups are not significantly different.

In terms of Hypothesis 2, older children do use a greater variety of critical categories than younger children but only when they are responding to a painting.

## Hypothesis 3

The variety of critical categories used by children of different age groups in the justification of their affective responses to two different arts experiences will be similar. Any differences existing between the two sets of responses will be within the limits of chance error.

In order to test this hypothesis, multiple comparisons between the means for opera and the means for painting were performed. The results of this analysis are summarized in Table 9 on page 66.

The analysis reveals that there are differences in the variety of critical criteria being used from one experience to another by older children in the 11½-15½ and 15½-18 year old age ranges. No such differences occur among the younger children in the study.

Table 9[1]

Comparisons Between Age Groups:

Variety of Criteria Used in Response to Painting and Opera

| | | | Painting | | | |
|---|---|---|---|---|---|---|
| | Ages | | 6-7½ | 7½-11½ | 11½-15½ | 15½-18 |
| | | Means | 2.07 | 2.40 | 2.80 | 3.03 |
| Opera | 6-7½ | 2.07 | 0.00 | | | |
| | 7½-11½ | 2.22 | | .18 n.s. | | |
| | 11½-15½ | 2.30 | | | .50** | |
| | 15½-18 | 2.21 | | | | .82** |

P < .01 **

[1] The F values were computed using the formula $F = \frac{(AB_{ij} - A_{km})^2}{2nMSw.cell}$ (Winer, p. 209).

The critical value suggested by Scheffe (Winer, p. 210) for a posteriori comparisons of means is particularly conservative and is used in this case.

## Summary of Results

(1) There are differences between the proportion of younger and older children using a particular critical category in justifying their affective response to an arts experience.

In responding to opera and painting, a greater proportion of younger children ($7\frac{1}{2}$-$11\frac{1}{2}$) used the category of sensory elements. The subject matter category was used by a greater proportion of older children in response to painting and a greater proportion of younger children in response to opera.

In responding to opera and painting, a greater proportion of older children ($11\frac{1}{2}$-18) used categories of formal properties, communication, extra-aesthetic function and general perceptual interest.

There were no differences between the proportion of younger and older children using categories of expressive elements and technical competence.

(2) Older children do use a greater variety of critical categories than younger children in the justification of their affective response to arts experiences. However, this is true only when considering children's responses to painting. There were no significant differences in variety of criteria used among the children of the different age groups when they verbally responded to opera.

(3) There are differences in the variety of critical categories being used from one experience to another by older children ($11\frac{1}{2}$-18). They use a greater variety of criteria in their responses to painting. Younger children (6-$11\frac{1}{2}$) use approximately the same number of criteria in response to both art experiences.

## DISCUSSION AND IMPLICATIONS

The findings of a developmental study have their greatest utility when they give us knowledge about the capabilities of children. With a knowledge of what children within a particular age group are capable of, educators, parents and others dealing with children can adjust the demands they make upon them according to what is known about them. Instruction, based on this knowledge, tries to encourage responses that one knows in a general way are within the range of children's capabilities. In the same way unfair demands, demands for responses that have a low probability of occurring are lessened. The frustration that occurs when children are asked to perform tasks that are beyond their capabilities is avoided.

The findings of this study, however, can only serve as guidelines to educators. It reports on the capabilities of groups of children within broad age classifications, not on particular individuals. Individual children within a particular age group do respond in ways that are not similar to the majority of their peers. Failure to recognize this would lead to instructional situations in which we treat in-

dividuals as a group.

In the interpretation and generalizing of the results of the study, one must be cautious. The sample, six hundred thirty-one students drawn from an "average" school district, responded to two arts experiences. It is possible that children from another school district of a different size or different ethnic composition may respond to arts in different patterns. Children's response to other arts forms or other art experiences within the same form may differ.

With these qualifications, the study does suggest some interesting conclusions, and these are discussed according to each age category considered in the study.

The group of children in the 6-7½ year age bracket generally make use of only two critical criteria. These are likely to be subject matter or sensory elements. Some of the apparently higher cognitive criteria of formal properties, extra-aesthetic function and communication are not used at all. Criteria of technical competence and expressive elements are used minimally. Expressive elements which reports on a child's emotional response to a painting or opera ("It's spooky." "It makes me feel sad.") is used by some children when responding to the opera. Perhaps the liveliness, humor and pathos of "Gianni Schicchi" evokes such response.

There are a substantial number of non-responses (at least in terms of this study) with children seemingly unable to find or use one relevant criterion in their verbal response. The reason for a non-response is not clear. One may attribute this to an inability

to articulate one's reasons for liking or disliking a work or, one may say that the painting or opera failed to evoke a meaningful response. In general, the findings for this group of young children are similar to those found by Moore (1970), Wilson (1966) and Machotka (1966) who noted children's tendency to respond to the more objective or literal aspects of works of art. In this way children talk about the colors and sounds that please them, the parts of the "story" that were funny or the shapes that attract their eye.

Children in the $7\frac{1}{2}$-$11\frac{1}{2}$ year old group generally make use of two criteria. Those are likely to be (like the younger children) sensory elements and/or sensory elements and general perceptual interest. They, unlike the younger group, do use some of the other criteria to a minimal degree. Respondents to opera sometimes talk about the competence of the actors; the ability of the opera singers to sing well or act out their parts. Some recognize that the composer of the music has done a good job. Some children use this criterion to compliment Chagall on the competence with which he produced his painting. Others are impressed with his originality and his ability to produce such an interesting painting or "drawing". They do not use a greater number of criteria when moving from talking about opera to justifying their affective response to the painting, nor are the higher cognitive criteria of formal properties: communication, extra-aesthetic function being used with great frequency. On a group basis however they begin to use a greater variety of criteria. This

suggests that with some training in criterion use, children in this age group may be able to respond to more aspects of painting and opera.

When children reach the age bracket of 11½-15½ years, they use approximately the same number of critical criteria as the younger children in the study when responding to an opera. These, like the 7½-11½ year olds, are general perceptual interest, sensory elements, or subject matter. They also use some of the other criteria to a small degree. They, however use a significantly greater number of critical criteria when responding to the Chagall painting. In this sense, they seem more able to attend to a variety of aspects of the painting. All criteria receive some use including the higher level criterion of formal properties. Children in this group seem particularly able to respond to the competence of Chagall in his execution of "I and My Village." They comment on his choice of colors and his ability to effectively balance his figures in the painting. They see the painting as Chagall's attempt to comment upon rural life or to make a religious point. A sizeable proportion (18%) in some way indicate that a painter attempts to communicate feelings or messages through his painting. Once again, it is not clear why they are more able to discuss painting than opera. It may be that they have simply had limited exposure to opera but are capitalizing on the six - ten years of art instruction they have received in school.

The response patterns of 15½-18 year olds are quite similar to those of the earlier group. They use approximately the same number

of criteria as the earlier group when they respond to the opera. They use a greater number of criteria than the 6-7½ year olds and 7½-5½ year olds when they respond to painting and, in terms of criterion use, are more able to discuss painting than opera. The greatest proportional use of the formal properties criterion is found in this group. Of all age groups their percentage is lowest (4%) in terms of the use of the non-critical "idiosyncratic" criterion. They like the earlier group are using a variety of critical criteria and seem more able to discuss opera than painting.

In terms of the total sample, the groups differentiate themselves only in terms of their response to painting. When this differentiation is made the younger 6-7½ and 7½-11½ year olds tend to be responding to fewer, more literal aspects of Chagall's painting. The older group, apparently more experienced with this art form, uses a greater variety of criteria and greater proportions of the higher level critical criteria.

## Implications for Arts Curricula and Further Research

Teachers of the arts would do well to consider the ways in which their students respond to arts and devise strategies for encouraging children to use a variety of critical criteria, when talking about various art forms.

A teacher can help children to see the many facets of a work of art and encourage him to talk about them. It is possible that once a child gains a sense of familiarity with works of art through his discussion of them he may begin to seek them out in non-school situations.

Teachers of children in the 6-11½ age range, based on evidence in this study, can probably build upon children's apparent capability to use the sensory elements, subject matter and general perceptual interest categories defined in this study. Teachers of older children should probably encourage the use of the whole variety of criteria, although some of the higher level criteria (formal properties in particular) may require specific training and depth of experience.

In addition, arts teachers should recognize that certain art forms may pose special problems for children who wish to make sense out of them. In this study children were generally more able to talk about the painting than opera. This is true probably because more children in all age groups have had some contact with painting in their classrooms, homes, or in their community, and probably very little with opera. It is possible that more frequent exposure to certain forms of

art may increase a child's familiarity with those forms.

The findings suggest other areas of research to be pursued. One obvious one would be a replication of the study using the category system created by the investigator with different samples of 6-18 year olds.

Other investigators could look for developmental differences using similar art experiences or other forms: ballet, orchestral music, modern dance, film, sculpture, etc. One could use as stimuli, different experiences within the same form, e.g., painting - abstract, semi-abstract, realistic, etc.

One may wish to see if the responses of children vary when they respond to non-arts phenomena.

It is possible also that children's ability to use a variety of critical categories or to use higher level categories will increase after they have undergone a short period of instruction in talking about arts. An experimental study using such instruction as a treatment factor could provide valuable information about the trainability aspects of children's justification of their affective response to arts experiences.

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